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Marine Life Protection Act Initiative

Overview of North Coast Fisheries Uses and Value Project and Round 1 Evaluation of Potential Impacts to Commercial and Recreational Fisheries

Presentation to the MLPA Blue Ribbon Task Force
May 3, 2010 • Crescent City, California

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Project Overview

- Ecotrust contracted by MLPA Initiative to:
  - Supplement existing data
  - Collect data on commercial, commercial passenger fishing vessel (CPFV), and recreational fishing (use and values) to characterize the spatial extent and relative importance
  - Evaluate the maximum potential economic impact (gross and net) of marine protected area (MPA) proposals
  - Focus is on the fisheries, and not on regional multipliers of economic impact

Survey Design

- Identify key fisheries in the region
  - Differentiate in terms of practices/gear type (commercial) and use type (recreational – private vessel, kayak and dive)
- Stratify study region into port complexes
- Sampling goals:
  - At least 50% of the total ex-vessel revenue from 2000-07 by fishery, gear type, and port
  - At least 5 fishermen, except in cases where the overall population is <5, then 100%

Survey Design – Target Species

	Commercial	CPFV	Recreational
Anchovy/sardine	✓		
California halibut		✓	✓
Coonstriped shrimp	✓		
Dungeness crab	✓	✓	✓
Hagfish	✓		
Herring	✓		
Pacific halibut		✓	✓
Rockfish	✓	✓	✓
Red abalone			✓
Sablefish	✓		
Salmon	✓	✓	✓
Seaweed	✓		
Smelt	✓		
Surfperch	✓		
Urchin	✓		

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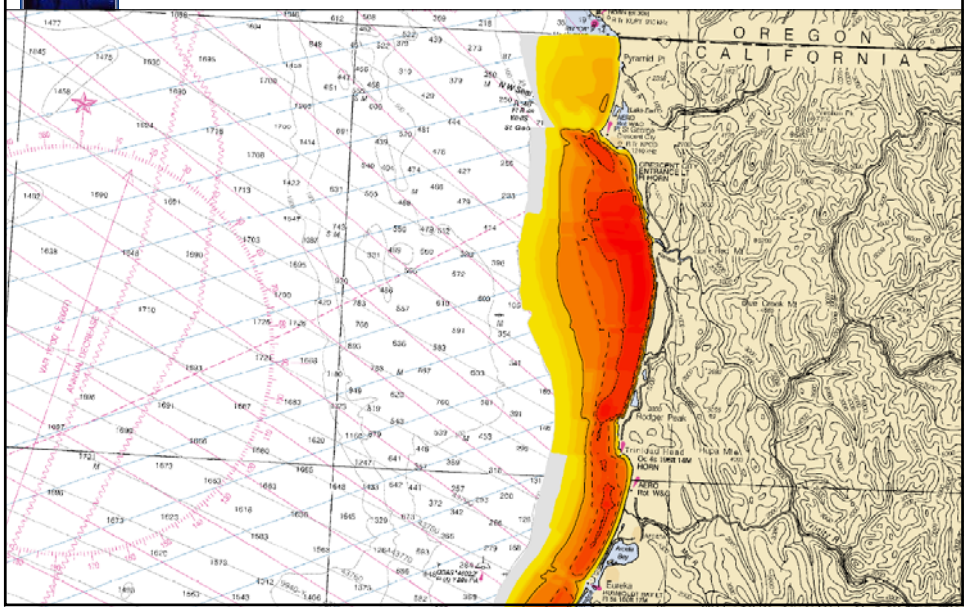
Commercial Dungeness Crab - NCSR



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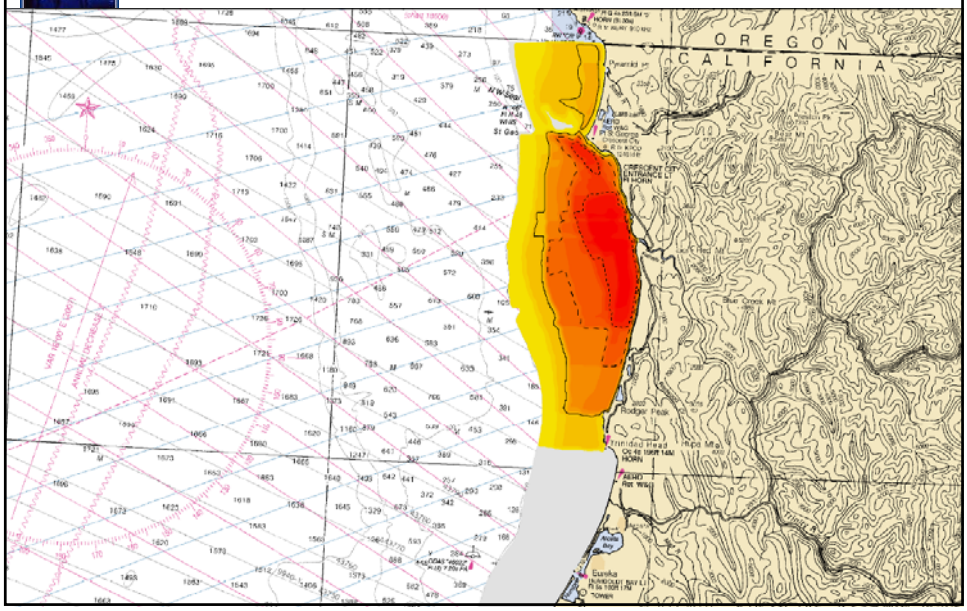
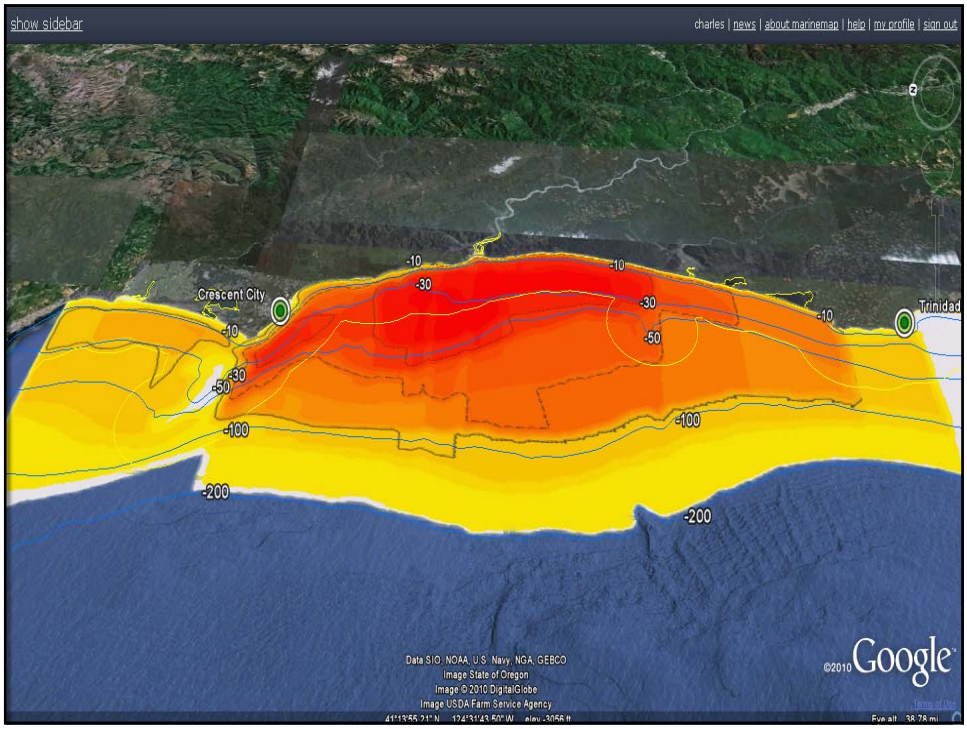
Commercial Dungeness Crab – Crescent City





Round 1 Evaluation: Overview

- Reviewed existing MPAs and eight external proposed MPA arrays (ExA-ExH)
- Based on the aggregate fishing grounds and cost estimates derived from the data collection effort:
  - Determined percentage of area and value affected
  - Evaluated the maximum potential first order economic impact
  - Considered or identified “outliers” – i.e., fishermen or fisheries likely to experience disproportional impacts
- Focus is on the fisheries, and not on regional multipliers
- For Round 1, tribal uses were not considered because science team currently does not have sufficient information to integrate tribal uses into evaluations
- For Round 1, MPAs in ExA were considered static

Evaluation Overview

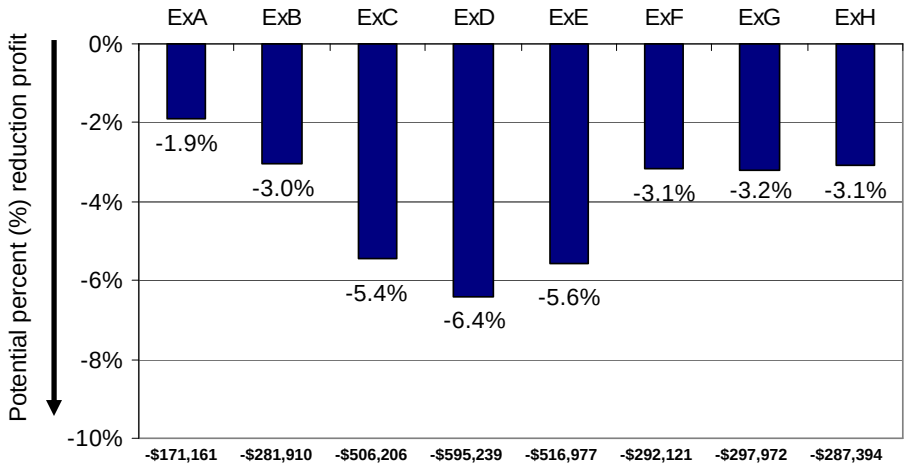
	Commercial	CPFV	Recreational
# of fisheries	10 species	5 species	6 species
Level of analysis	Port-fishery combinations	Port-fishery combinations	Results reported by user group (private vessel, kayak, dive) and by port
Sample size	219	22	574

****Reported results represent the <u>maximum potential impacts</u>**

	Commercial	CPFV	Recreational
Potential impacts on fishing grounds (area and stated value)	✓	✓	✓
Potential net economic impacts -1st order	✓	✓	
Potential gross economic impacts -1st order	✓		
Disproportionate impacts on fisheries	✓	✓	
Disproportionate impacts on individuals	✓		

Net Economic Impacts (Commercial)

- ExA has the lowest potential net economic impact



Net Economic Impacts (Commercial)

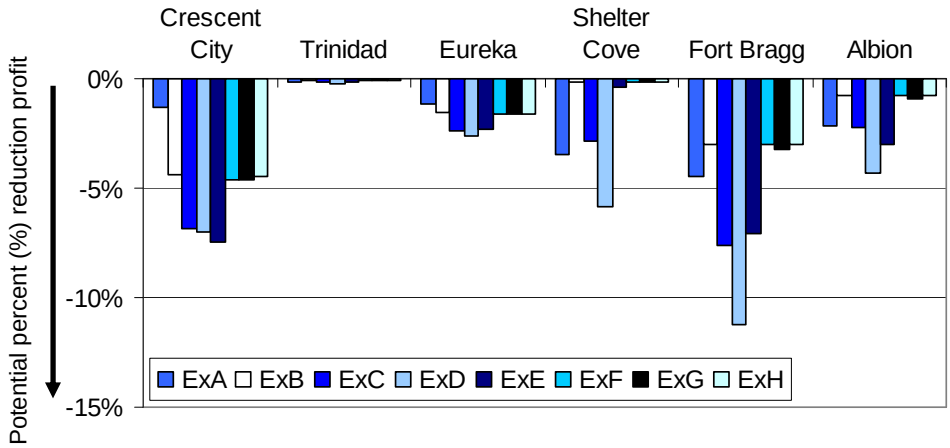
- Reported results represent the maximum potential impacts (i.e., “worst case scenario”)

Port	ExA	ExB	ExC	ExD	ExE	ExF	ExG	ExH
	$ Reduction in Profit							
Crescent City	$56,539	$188,222	$295,276	$301,187	$319,332	$196,909	$196,909	$192,241
Trinidad	$777	$363	$995	$1,338	$1,210	$511	$511	$510
Eureka	$23,110	$31,273	$49,519	$53,998	$46,539	$32,649	$32,649	$32,604
Shelter Cove	$1,365	$62	$1,113	$2,315	$167	$62	$62	$62
Fort Bragg	$90,018	$60,464	$154,761	$227,649	$143,568	$60,464	$65,916	$60,427
Albion	$4,351	$1,526	$4,542	$8,752	$6,160	$1,526	$1,925	$1,550
NCSR	**$176,161**	**$281,910**	**$506,206**	**$595,239**	**$516,977**	**$292,121**	**$297,972**	**$287,394**
	% Reduction in Profit							
Crescent City	1.3%	4.4%	6.9%	7.0%	7.4%	4.6%	4.6%	4.5%
Trinidad	0.1%	0.1%	0.1%	0.2%	0.2%	0.1%	0.1%	0.1%
Eureka	1.1%	1.5%	2.4%	2.6%	2.3%	1.6%	1.6%	1.6%
Shelter Cove	3.4%	0.2%	2.8%	5.8%	0.4%	0.2%	0.2%	0.2%
Fort Bragg	4.4%	3.0%	7.6%	11.2%	7.1%	3.0%	3.2%	3.0%
Albion	2.1%	0.7%	2.2%	4.3%	3.0%	0.7%	0.9%	0.8%
NCSR	**1.9%**	**3.0%**	**5.4%**	**6.4%**	**5.6%**	**3.1%**	**3.2%**	**3.1%**

The rockfish fishery includes the shallow and deeper nearshore fish species, and lingcod fisheries.

Net Economic Impacts (Commercial)

- Generally, Trinidad has the lowest potential net impacts across all proposals



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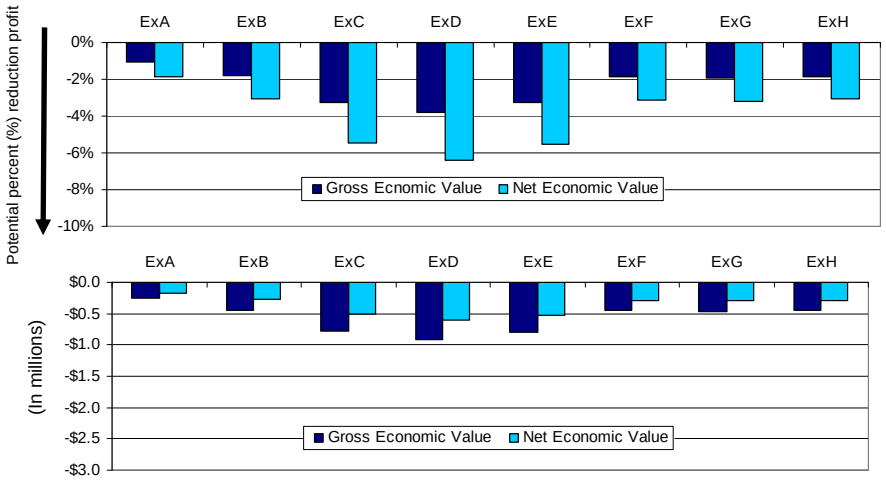
Comparison of Economics Impacts (Commercial)

- Gross and net potential impacts essentially the same; however, the magnitude of the impacts differs



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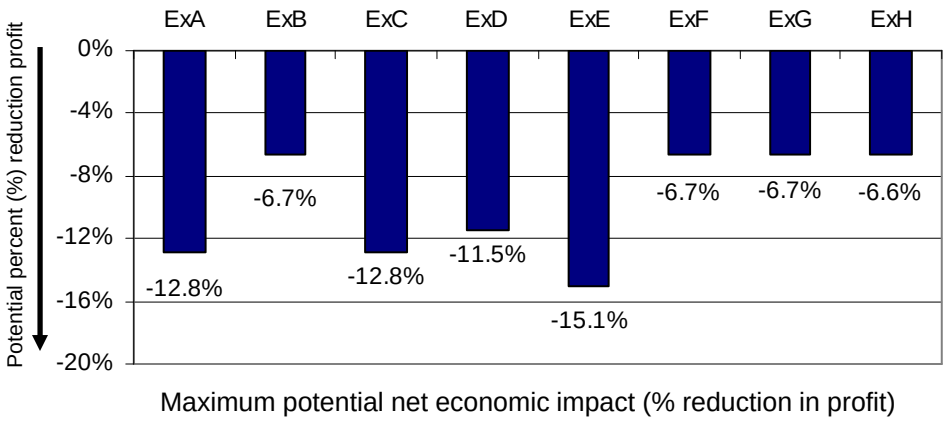
Net Economic Impacts (CPFV)

- ExH has the lowest potential net economic impact on CPFV fisheries, followed closely by ExB, ExF and ExG



Maximum potential net economic impact (% reduction in profit)

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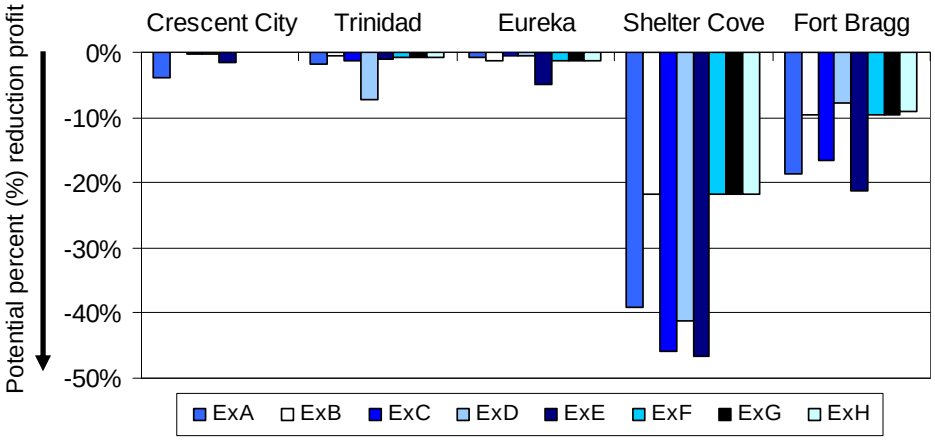
Net Economic Impacts (CPFV)

- Generally, Shelter Cove has the highest potential impacts across all proposals and Fort Bragg has the next highest potential impacts



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Disproportionate Impacts Summary

- Commercial port-fishery combinations disproportionately impacted

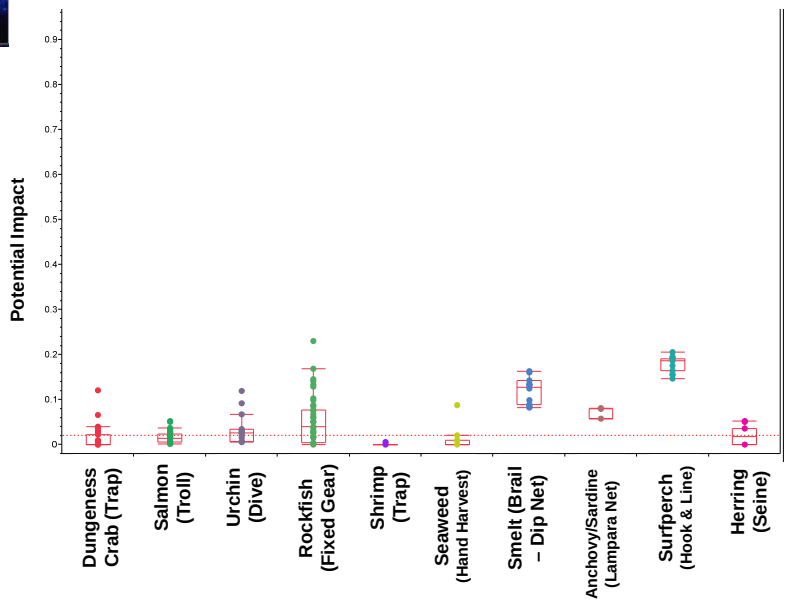
Port	Fishery	MPA Proposal(s)	Estimated Impact on Stated Value of Total Fishing Grounds
Crescent City	Rockfish	ExE	23.0%
Crescent City	Seaweed	ExE	8.8%
Fort Bragg	Dungeness crab	ExC, ExD	6.6%, 12.2%
Fort Bragg	Urchin	ExD, ExE	12.0%, 9.2%
Shelter Cove	Salmon	ExD	5.1%
Trinidad	Salmon	ExD	5.2%

Disproportionate Impacts Summary

- CPFV port-fishery combinations disproportionately impacted

Port	Fishery	MPA Proposal(s)	Estimated Impact on Stated Value of Total Fishing Grounds
Eureka	Rockfish/Bottomfish	ExE	13.7%
Fort Bragg	Dungeness crab	ExA, ExB, ExC, ExE, ExF, ExG, ExH	16.3%, 9.0%, 16.7%, 17.3%, 9.0%, 9.0%, 9.0%
Fort Bragg	Salmon	ExC, ExE	13.3%, 15.5%
Fort Bragg	Rockfish/Bottomfish	ExA, ExD, ExE	15.5%, 13.6%, 15.2%
Shelter Cove*	Pacific Halibut	ExA, ExB, ExC, ExD, ExE, ExF, ExG, ExH	78.0%, 49.2%, 97.7%, 78.0%, 97.7%, 49.2%, 49.2%, 49.2%
Trinidad	Rockfish/Bottomfish	ExD	11.8%

Disproportionate Impacts: Commercial



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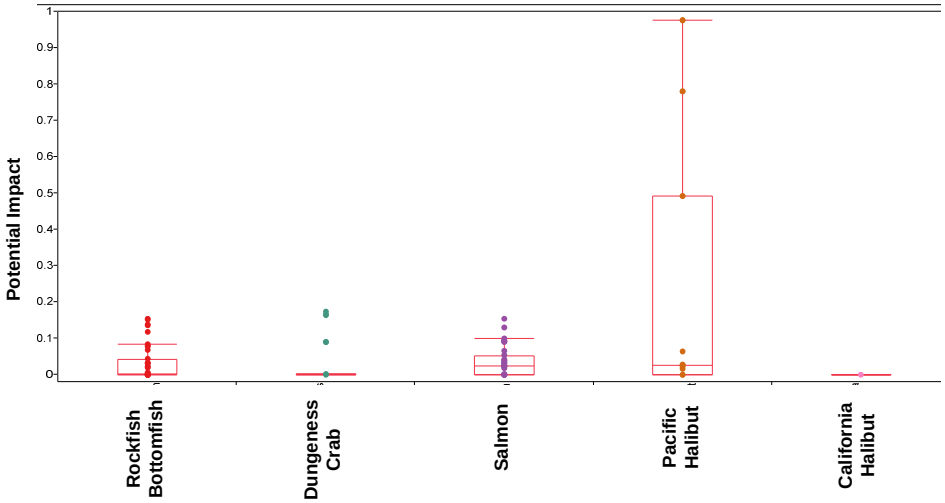
Disproportionate Impacts: CPFV



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Summary Across Sectors

- The estimated average net economic impact across all proposals varies substantially between commercial (9.9%) and CPFV (4.0%)
- ExC, ExD, and ExE generally have higher potential impacts than other proposals for commercial and CPFV
- Rockfish fishery generally has the highest potential impact for recreational species and Fort Bragg generally has higher potential recreational impacts relative to other ports

	MPA Proposal with highest potential impact		MPA Proposal with lowest potential impact	
		Net economic value		
Commercial	ExD	-6.4%	ExA	-1.9%
CPFV	ExE	-15.1%	ExH	-6.6%